

Listing of Claims

1. (amended) A continuously variable speed power transmission comprising:

an input member rotatable about an input axis;

an output member rotatable about an output axis including a plurality of rearwardly directed output rotor external face gear teeth thereon;

a conjugate reaction control rotor with integrated motor/generator components mounted for selective rotation about the input axis including a plurality of forwardly directed reaction external face gear teeth thereon in opposition to the output external face gear teeth on the output member;

a conjugate motion converter with internal face gear teeth having pitch angles greater than 90 degrees embodied on both sides thereon and rotatably mounted for nutational and rotational motion about the input axis that are simultaneously engageable with the output rotor external face gear teeth and with the reaction rotor external face gear teeth; and

control means for selectively adjusting the rate of rotation of the reaction control rotor relative to the input member;

whereby relative rotation between the reaction control rotor and the input member results in both rotation and nutation of the conjugate motion converter about the input axis and thereby results in a continuously

variable change of ratio of the rotational speed of the output member relative to the input member.

2. (cancelled) A continuously variable speed power transmission as set forth in claim 1, wherein said teeth are selected from the group consisting of external and internal bevel and face type teeth

3. (amended) A continuously variable speed power transmission with integrated motors/generator components comprising:

an input member rotatable about an input axis;

an output member rotatable about an output axis including a plurality of rearwardly directed output face cams thereon;

a reaction control rotor with integrated ~~motors/generator~~ motor/generator components mounted for selective rotation about the input axis including a plurality of forwardly directed reaction face cams thereon in opposition to the output face cams on the output member;

a pericyclic motion converter rotatably mounted for nutational motion about the input axis including a plurality of load transmitting follower members thereon simultaneously engageable with the output face cams and with the reaction face cams; and

control means for selectively adjusting the rate of rotation of the reaction control rotor relative to the input member;

whereby relative rotation between the reaction control rotor and the input member results in both rotation and nutation of the pericyclic motion converter about the input axis and thereby results in a continuously variable change of ratio of the rotational speed of the output member relative to the input member.

4. (cancelled) The continuously variable speed power transmission of claim 1, wherein said reaction control rotor is integrated with motors/generator components mounted for selective rotation about the input axis.

5. (previously presented) The continuously variable speed power transmission of claim 1, wherein said transmission is in a vehicle wheel hub.

6. (cancelled) The continuously variable speed power transmission of claim 4, wherein said transmission is in a vehicle wheel hub.

7. (amended) A continuously variable speed power transmission comprising:

an input member rotatable about an input axis;

an output member rotatable about an output axis including a plurality of rearwardly directed output rotor external bevel gear teeth thereon;

a conjugate reaction control rotor with integrated motor/generator components mounted for selective rotation about the input axis including a

plurality of forwardly directed reaction external bevel gear teeth thereon in opposition to the output external bevel gear teeth on the output member;

a conjugate motion converter with internal bevel gear teeth having pitch angles greater than 90 degrees embodied on both sides thereon and rotatably mounted for nutational and rotational motion about the input axis that are simultaneously engageable with the output rotor external bevel gear teeth and with the reaction rotor external bevel gear teeth; and

control means for selectively adjusting the rate of rotation of the reaction control rotor relative to the input member;

whereby relative rotation between the reaction control rotor and the input member results in both rotation and nutation of the conjugate motion converter about the input axis and thereby results in a continuously variable change of ratio of the rotational speed of the output member relative to the input member.

8. (cancelled) The continuously variable speed power transmission of claim 7, wherein said reaction control rotor is integrated with motors/generator components mounted for selective rotation about the input axis.

9. (previously presented) The continuously variable speed power transmission of claim 7, wherein said transmission is in a vehicle wheel hub.

10. (cancelled) The continuously variable speed power transmission of claim 8, wherein said transmission is in a vehicle wheel hub.

11. (previously presented) The continuously variable speed power transmission of claim 3, wherein said transmission is in a vehicle wheel hub.

12. (new) The continuously variable speed power transmission of claim 1, wherein said transmission further comprises DC speed control motor elements integrated with said input member.

13. (new) The continuously variable speed power transmission of claim 12, wherein said transmission is in a vehicle wheel hub.

14. (new) The continuously variable speed power transmission of claim 3, wherein said transmission further comprises DC speed control motor elements integrated with said input member.

15. (new) The continuously variable speed power transmission of claim 14, wherein said transmission is in a vehicle wheel hub.

16. (new) The continuously variable speed power transmission of claim 7, wherein said transmission further comprises DC speed control motor elements integrated with said input member.

17. (new) The continuously variable speed power transmission of claim 16, wherein said transmission is in a vehicle wheel hub.

Amendments to the Drawings

The drawings are objected to under 37C.F.R. §1.83(a) for failing to show the 90 degree pitch angle for the motion converter teeth as described in the specification. The attached sheet of informal drawings inserts Fig. 18A on the sheet containing Fig. 18. Fig 18A is a cross sectional view of the embodiment of Fig. 18 which shows the pitch angle of the teeth of the reaction control rotor and the output rotor with pitch angles greater than 90 degrees. This sheet, which includes Fig. 18 and Fig 18A replaces the original sheet including Fig. 18.

Attachment: Replacement Sheet